

USSN 09/808,867, filed March 15, 2001
Docket No. 1133279-0003
Page 2 of 22

Amendments to the Specification:

The Abstract is amended as shown below. Please replace the Abstract with the replacement page containing the amended Abstract which is attached to and made part of this Amendment.

ABSTRACT

-- A medical device coated with one or more antibodies and one or more layers of a matrix is disclosed. The antibodies or fragments thereof react with an endothelial cell surface antigen. Also disclosed are ~~This invention is directed to compositions and methods for producing the a medical device coated with a matrix and an antibody which reacts with an endothelial cell antigen. The matrix coating the medical device may be composed of a synthetic material, such as a fullerene, or a polyurethane, poly-L-lactic acid, cellulose ester or polyethylene glycol. In another embodiment, the matrix is composed of naturally occurring~~ material ~~materials, such as collagen, fibrin, elastin, amorphous carbon. In a third embodiment, the matrix may be composed of fullerenes. The fullerenes range from about C60 to about C100. The medical device may be a stent or a synthetic graft. The antibodies promote the adherence of endothelial cells captured in vivo on the medical device. The antibodies may be mixed with the matrix or covalently tethered through a linker molecule to the matrix. Following adherence to the medical device, the endothelial cells differentiate and proliferate on the medical device. The antibodies may be different types of monoclonal antibodies. Methods of preparing the coating such composition and methods of treating a mammal with atherosclerosis or other types of vessel obstruction are disclosed. By facilitating adherence of endothelial cells to the surface of the medical device, the disclosed methods and compositions of this invention will decrease the incidence of restenosis as well as other thromboembolic complications resulting from implantation of medical devices.~~ --